

March 22, 2010



U.S. Department
of Transportation

East Building, PHH – 30
1200 New Jersey Avenue, Southeast
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 13330
(THIRD REVISION)

EXPIRATION DATE: February 28, 2014

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Schlumberger Oilfield UK PLC
Dyce, Aberdeen, Scotland, United Kingdom
(U.S. Agent: Schlumberger Reservoir Completions
Houston, Texas)
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the manufacture, marking, sale and use of a non-DOT specification cylinder conforming with all regulations applicable to a DOT Specification 3A cylinder, except as specified herein, for the transportation in commerce of the materials authorized by this special permit. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.302a(a) and 173.304a(a) in that a non-DOT-specification cylinder is not authorized, except as specified herein.
5. BASIS: This special permit is based on the application of Schlumberger Oilfield UK PLC dated January 25, 2010 submitted in accordance with § 107.109.

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Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Hydrocarbon gas mixture, compressed, n.o.s.	2.1	UN1964	N/A
Hydrocarbon gas mixture, liquefied, n.o.s.	2.1	UN1965	N/A
Hydrogen sulfide	2.3	UN1053	N/A Hazard Zone B
Liquefied gas, flammable, n.o.s.	2.1	UN3161	N/A
Compressed gas, toxic, flammable, n.o.s. Inhalation Hazard Zone B*	2.3	UN1953	N/A Hazard Zone B
Petroleum gases, liquefied or Liquefied petroleum gas	2.1	UN1075	N/A

* Applicable parts of § 173.40 must be complied with when transporting this material.

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Prescribed packaging is a non-DOT specification oil well sampling cylinder, threaded at one end, with a design pressure of 25,000 psig. Each cylinder must comply with the design calculations, drawings, material specifications, and engineering specifications submitted with Schlumberger's application for special permit on file with the Office of Hazardous Materials Special Permits and Approvals (OHMSPA). In addition, each cylinder must conform with the DOT 3A Specification (§§ 178.35 and 178.36) except as follows:

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§ 178.35(e) *Safety devices.* No pressure relief device is required on the completed cylinder. Cylinder must be equipped with elastomeric seals that relieve pressure when subjected to a pool fire. The start to discharge pressure must not exceed the hydrostatic test pressure.

§ 178.35(f) *Marking.* Applies except that cylinders must be marked "DOT-SP 13330" in lieu of DOT Specification marking.

§ 178.36(b) *Steel.*

17-4PH stainless steel (UNS S17400), Inconel 718 (UNS N07718) or Monel K-500 (UNS N05500) conforming with Schlumberger-Oilphase's Materials Specifications 100021899, 100007444, and 100021901 respectively, on file with OHMSPA. Material must meet the requirements of the National Association of Corrosion Engineers (NACE) Specification MR-01-75 for suitability in hydrogen sulfide (H₂S) service.

§ 178.36(f) *Wall thickness.* The wall stress at the minimum specified test pressure may not exceed 60 percent of the minimum tensile strength as determined from the physical tests required in § 178.36(k) and (l).

§ 178.36(g) *Heat treatment.* No heat treatment required for the completed cylinder. However, the heat treatment of the purchased stock material must conform to Schlumberger-Oilphase's Materials Specifications 100021899, 100007444, and 100021901 as applicable, on file with OHMSPA.

§ 178.36(h) *Openings in cylinders and connections for those openings.* Openings and connections must conform to Schlumberger-Oilphase's drawings on file with OHMSPA.

§ 178.36(i) *Hydrostatic Test.*

(1) * * *

(2) * * *

(3) * * *

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(4) * * *

(5) The inspectors report must include the volumetric capacity and tare weight of each cylinder without internal components.

§ 178.36(j) *Flattening Test.* A flattening test is not required.

§ 178.36(k) *Physical Test.*

(1) Applies except, the test is required of two specimens cut 180 degrees opposed from portions of bar stock from which the finished cylinder is machined. Each heat of material representing a lot of 200 or less must be tested. Heating of any specimen is prohibited.

§ 178.36(l) *Acceptable results for physical tests.*

17-4PH Stainless Steel

Minimum Tensile strength:	135,000 psi
Minimum Yield strength:	105,000 psi
Elongation:	16% on 1 inch gauge specimen

Iconel 718

Minimum Tensile strength:	175,000 psi
Minimum Yield strength:	125,000 psi
Elongation:	20% on 1 inch gauge specimen

Monel K-500

Minimum Tensile strength:	135,000 psi
Minimum Yield strength:	100,000 psi
Elongation:	16% on 1 inch gauge specimen

§ 178.36(m) *Leakage test.* Each completed cylinder assembly must be pressurized to at least 25,000 psig for a period of not less than 30 seconds to verify the integrity of the finished configuration. No leakage of any component is permitted prior to final packaging of the cylinder assembly.

§ 178.36(n) *Rejected cylinders.* Rejected cylinders may not be re-heat treated.

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b. TESTING - Each cylinder must be reinspected and hydrostatically retested in accordance with §§ 180.205 and 180.209 as prescribed for DOT 3A Specification cylinders. When a hydrostatic retest of a cylinder is performed due to equipment failure as authorized in § 180.209(f), only two such retests are permitted. Reheat treatment or repair of rejected cylinders is not permitted.

c. OPERATIONAL CONTROLS -

(1) Each cylinder must be packed in the transportation box as specified in the application for special permit on file with the OHMSPA.

(2) Emergency response information provided with the shipment and available via an emergency response telephone number must indicate that the receptacles are not fitted with pressure relief devices and provide appropriate guidance in case receptacles are exposed to fire.

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this special permit for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.

b. A person who is not a holder of this special permit, but receives a package covered by this special permit, may reoffer it for transportation provided no modification or change is made to the package and it is offered for transportation in conformance with this special permit and the HMR.

c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

d. Each packaging manufactured under the authority of this special permit must be either (1) marked with the name of the manufacturer and location (city and state) of the facility at which it is manufactured or (2) marked with a registration symbol designated by the Office of Hazardous Materials Special Permits and Approvals for a specific manufacturing facility.

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- e. A current copy of this special permit must be maintained at each facility where the package is manufactured under this special permit. It must be made available to a DOT representative upon request.
- f. The cylinders are authorized for oil well sampling service only.
- g. Transportation of Division 2.1 materials (flammable gases) and Division 2.3 materials (gases which are toxic by inhalation) are not authorized aboard cargo vessel or aircraft unless specifically authorized in the Hazardous Materials Table (§ 172.101).
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, and cargo aircraft only (see restrictions in paragraph 8.g. above).
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel or aircraft used to transport packages covered by this special permit. The shipper must furnish a current copy of this special permit to the air carrier before or at the time the shipment is tendered.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
 - o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

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No person may use or apply this special permit, including display of its number, when the special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) - 'The Hazardous Materials Safety and Security Reauthorization Act of 2005' (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Dr. Magdy El-Sibaie
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: ew